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NADAR

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www.movesinstitute.org/research-project/nadar-research/

Project Abstract

The main purpose of the application is to explore using a mobile platform to display networked position location information in a contextual graphical format.

Sponsor

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Network Aware Detection And Ranging (NADAR)

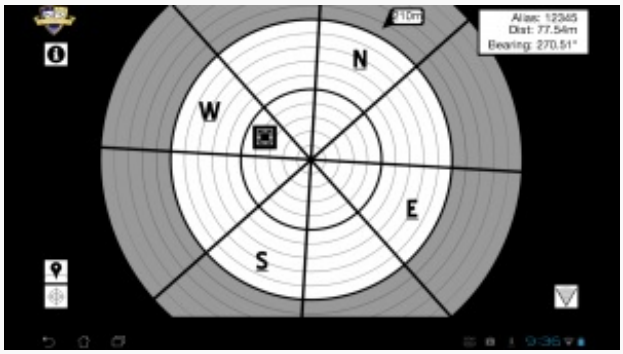
The NADAR technical demo application was created by the MOVES Visual Simulation and Game-Based Tech team. The main purpose of the application is to explore using a mobile platform to display networked position location information in a contextual graphical format. The user is better able to interact with the application by using a simplistic display with contrasting colors.
Phase Completed: Summer, 2012

Hardware used:

- Asus TF300T Android Tablet
- USB to ethernet adapter
- TrellisWare Technologies TW-200 “CheetahNet” mesh network radio

Software:

- Unity3D Game Engine
- Android



The NADAR application displaying a Cursor on Target entity

The user’s position is represented by the center of the display. All other entities are spatially represented based on distance and bearing to the user. The entities are oriented based on the tablet’s internal compass.

The user also has the option to enter a “fake” position, instead of reading it from the connected radio’s GPS. This allows easier testing and development by “warping” the user to another position in the world.

Utilizing the standard touch screen interface allows the user to zoom in/out using the familiar pinch-zoom gesture.

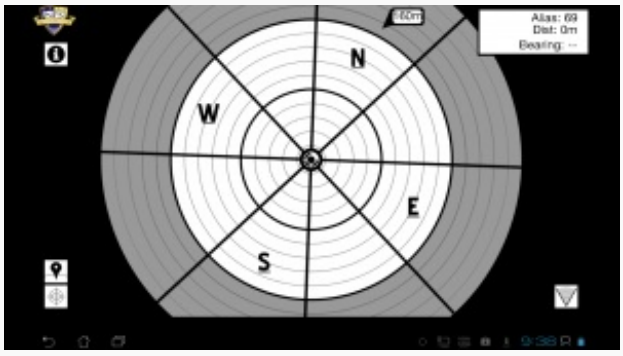
Watch the video to see NADAR in action!

Future work includes:

- 3D Terrain integration
- 2D Map overlay
- Wireless network connection (WiFi or Bluetooth)
- Additional graphic items such as velocity vectors and altitude indicators
- Local-side processing of data such as collision boundaries.

*Period of Performance:*Jul 2012 to Sep 2012
*Tags:*Game-Based Training, Mobile Computing, Simulation
*Focus Area:*Visual Simulation and Game-based Technology

NADAR has the ability to ignore the incoming GPS data and use the entered location instead.



The NADAR application utilizes familiar touch-screen gestures to zoom and select items.